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Is varietal/regional distinctiveness the key to re-building competitiveness?

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As Australian wineries strive to win back consumers now that the mining-induced appreciation of the AUD has reversed, they are looking for new ways to differentiate their product. Emphasizing regional differences is one option (as in the Old World). Differentiation through varietal labeling is another, as is the norm in the New World. Producers in both Old and New World countries also are differentiating by production technique (organic, biodynamic, etc.).

Producers are also well aware of the impact climate changes, particularly higher temperatures and more extreme weather events, are having on their winegrapes. Adaptation strategies include switching to warmer-climate or more-resilient grape varieties, and sourcing more from regions with a higher latitude or altitude to retain the firm's current mix of grape varieties.

Especially in regions and sites whose varietal comparative advantages are still unclear, winegrowers are continually searching for attractive alternative varieties that do well in climates similar to what they expect theirs to become in the future. Where affordable water availability is becoming a more-important issue, the drought and salt tolerance of varieties also is influencing varietal (and rootstock) choices.

This article looks at how Australia's winegrape varietal mix has changed over the past six decades, how both regions and varieties have changed in their area, yield and production of winegrapes since the turn of the century, how differentiated the nation's wine regions are becoming, and what new varieties are emerging. The data are drawn from a new 600-page book on the history of the Australian wine industry that is freely available as an ebook (Anderson 2015). The article concludes by addressing the question in its title in the light of these trends.

Evolution of national varietal mix since the 1950s

Australia has changed its winegrape varietal mix enormously during the past six decades. Figure 1 reveals the expanded share of bearing area of reds through the 1960s and 1970s before whites emerged with the popularity of Chardonnay, and then reds re-emerged with the expansion of both Cabernet Sauvignon and Syrah (Shiraz) plus Merlot. Accompanying the growth of these varieties was the demise in popularity of grape varieties such as Garnacha Tinta (Grenache), Muscat of Alexandria, Doradillo, Sultana, Palomino and Pedro Ximenes. Those declining varieties had been the mainstay of fortified wines and/or served well as

multi-purpose grapes able to be directed to drying when that was more profitable than their use in wine-making.

These trends in winegrape bearing areas mean there have also been great changes in the country of origin shares of the nation's winegrape varieties, as defined by Robinson, Harding and Vouillamoz (2012). Australia's mix has become more 'international' or, more accurately, more French. In the 1950s, only 20% of the national vineyard was planted to French varieties while 40% was planted to Spanish varieties and another 10% to Greek varieties. Only small shares were from Italy and Germany and the shares from other countries were tiny. By contrast, by the early 2000s all but 10% of the bearing area was planted to French varieties, and Spanish and German varieties filled half of the remainder (Figure 2).

What varieties does Australia dominate globally?

The main reason for Australia's varietal mix becoming more French has to do with Shiraz, or Syrah as it is called in most other parts of the world. The popularity which Australia brought to Syrah in the 1990s has led to many other countries expanding their plantings of this variety. In 1990 there were barely 35,000 bearing hectares globally, making it 35th in the area ranking of all winegrape varieties in the world. But by 2000 there were 102,000 hectares, and by 2010 that had risen to 186,000, bringing Syrah to the 6th position on that global ladder and less than one-third below the global areas of the two now-most-widespread varieties, namely Cabernet Sauvignon and Merlot.

Over the decade to 2010, the Syrah area grew more than either Cabernet or Merlot – in fact only Tempranillo expanded faster globally. Certainly Australia contributed to that expanding area of Syrah, but expansion was even greater in France and Spain. There were also large plantings in other key New World wine countries, and in Italy and Portugal. As a result, Australia is no longer as globally dominant in this variety: its share of the global Syrah area has dropped from 29% in 2000 to 23% in 2010 – even though Syrah has increased its share of Australia's own vineyards over that decade, from 22% to 28% (Anderson 2013).

There are four varieties in which Australia dominates global plantings even more than Syrah: Tarrango (100% of world bearing area in 2010), Verdelho (77%), Muscat a Petits Grains Rouge (38%) and Semillon (28%). Its global share of its other two popular varieties are 14% for Chardonnay and 9% for Cabernet Sauvignon (Table 1).

An additional way to express the extent of national varietal specialization, or differentiation from the rest of the world, is to divide the share of a variety in the national vineyard by its share globally. That so-called Varietal Intensity Index (VII) is above one for Australia for 26 varieties, but above five for only two more varieties in addition to those mentioned above, namely Petit Verdot and Ruby Cabernet (Table 1). For all the varieties that had a VII above one in 2010 and hence are listed in Table 1, as many as two-thirds of them had a higher VII in 2000. That provides another indication of the extent to which Australia's varietal mix has become less differentiated from the rest of the world's.

Varietal differences across regions within Australia

Varietal differences also are more muted between regions within Australia than is the case within other countries – notwithstanding the very large differences in growing conditions across Australia. In 2010, of the 3 most-similar regions in the world to each of Australia's 94 regions, less than 7% were non-Australian regions. In New Zealand, by contrast, more than two-thirds of the 3 most-similar regions to each of its ten regions were in other countries.

Emerging varieties in Australia

Ther has been much talk in recent years about increased plantings of so-called emerging or alternative varieties that are presumed to be diversifying Australia's vineyards. Of those varieties not in the world's top 20 list, and which have expanded from less than 200 bearing hectares in Australia in 2000, there are just ten whose areas have grown significantly since then. But in aggregate those ten raised their share of Australia's total area by only 1.7% (Table 2). The eight varieties whose area in Australia expanded most over the first decade of this century are, apart from Viognier, all in the top 20 globally. As for contracting varieties, Sultana is by far the most dominant – a variety whose global area also has shrunk greatly.

Since there is a total of less than 50 varieties separately identified in the Australian official data, that list excludes many of the small emerging varieties that are collected in a residual 'Others' category.[1] Even so, that 'Others' category accounted for just 5% of Australia's total area in 2000 and for only 1.6% by 2010, which means the main varieties have expanded much more than lesser alternative ones. As noted above, the share for Syrah alone rose 6 percentage points over that decade, while Chardonnay's rose 5 points and the shares of Sauvignon Blanc and Pinot Gris each rose 2 points.

Regional and varietal quality differences within Australia

That Australian winegrape regions vary substantially in terms of average winegrape prices received by growers is evident from estimates of the so-called Regional Quality Index, defined as the average winegrape price in a region (across all varieties) as a proportion of that average price nationally. Winegrapes from the hot inland irrigated regions of the Riverland, Riverina, Murray Darling and Swan Hill, which comprise nearly three-fifths of the national crush volume, received on average just 62% of the national average price in 2001, whereas regions with a warm (cool) climate received on average 42% (57%) above the national average price that vintage. Those differentials were muted at that time by the excess demand for winegrapes when wineries were rapidly expanding.

[1] Winetitles (2013) maintains a list of the varieties included on the labels of Australian wines. In 2013 it reported 144 varieties. This reflects the fact that many wineries like to advertise their novel varieties even if they represent only a small fraction of their total production. The Phylloxera Board (2013) has a much more-detailed dataset for South Australia, and it reveals another dozen varieties that have shown some growth between 2006 and 2012. Those data refer to planted rather than bearing area and so provide a better indicator of recent changes. But even these data reveal that emerging varieties make up only a small fraction of 1% of the national area. The total number of varieties in South Australia with more than 0.5 hectares rose by only 20 between 2006 and 2012, from 91 to 111.

By the time the global financial crisis hit in 2008, however, when there were excess supplies of many types of winegrapes, those differentials widened as the national average price dropped. In 2010, the average winegrape prices in the hot, warm and cool regions were 57%, 154%, and 191% of the national average – which had fallen in nominal A$ terms by two-fifths over that decade (from $941 to $557 per tonne). By 2013 that national average price was one-tenth lower again and price dispersion was even wider, ranging from $320-360 in the hot-climate regions to more than seven times that (almost $2500) in cool Tasmania and Mornington Peninsula (Figure 3(a)). The dispersion is almost as wide even for just Shiraz winegrapes (Figure 3(b)). This increase in regional price dispersion between 2001 and 2013 is clearly visible in the histograms of Figure 4.

Given that different varieties grow better in some regions than others, and that consumer tastes differ across varieties and over time, it is not surprising that there is also considerable dispersion in the national average prices by variety. In 2001 the difference between the lowest and highest varietal prices was more than six-fold, and it shrunk very little by 2010 despite the two-fifths fall in the nominal average price for all varieties.

The ranking from lowest- to highest-priced varieties changed a lot over the past decade though. This reflects the fact that the mixes of varieties in all three climate zones in Australia have altered considerably. Figure 5 shows that the range in 2013 from lowest-priced to highest-priced, even for just the main varieties, was four-fold, but it is six-fold if minor varieties such as Pinot Meunier are included.

Moreover, for each variety there is a wide spectrum of prices across and even within regions. As Figure 3 reveals, the cross-regional range for Shiraz prices is almost as large as that for the all-variety average regional prices, even though data are not available for including some of the highest-priced cool regions with emerging Shiraz vineyards. Notwithstanding that data limitation at the highest price levels, an increase in varietal price dispersion between 2001 and 2013 is clearly visible in the histograms for the Varietal Quality Index in Figure 6.

Would greater varietal/regional distinctiveness help re-build competitiveness?

Does it matter that Australia's mix of winegrape varieties is not very different from the rest of the world's and, since 2000, it has become even less differentiated? Perhaps the increasing concentration on major 'international' varieties is partly a result of producers in newly expanding wine-producing regions finding it easier to market them because of France's strong reputation with those varieties. Or might part of the explanation also be that those key varieties do well in a wide range of growing environments, or are more drought- or salt-tolerant, or have been found to be desirable for blending with other varieties that grow well in the same regions?

This question of whether Australia's mix of varieties is less than ideal for the terroir of its various regions is not a new one. Hickinbotham (1947) believed more than six decades ago that Australia's hot regions were not focused enough on varieties from warmer parts of Europe. More specifically, McKay et al. (1999) felt that varieties from the warmer parts of Italy were under-represented in Australia. And Dry and Smart (1980) suggested that if acid addition had been outlawed in Australia, our hot regions would have been forced to at least add 'improver' varieties to their varietal mix.

The fact that Australia's varietal mix is so concentrated on a few French varieties does suggest there is plenty of scope to explore alternative varieties. This is something grapegrowers are doing in any case as they consider ways to adapt to climate changes. However, the above data suggest that its impact on the overall varietal mix has been very small so far – despite much discussion of alternative or emerging varieties in the media and at conferences.

Acknowledgements

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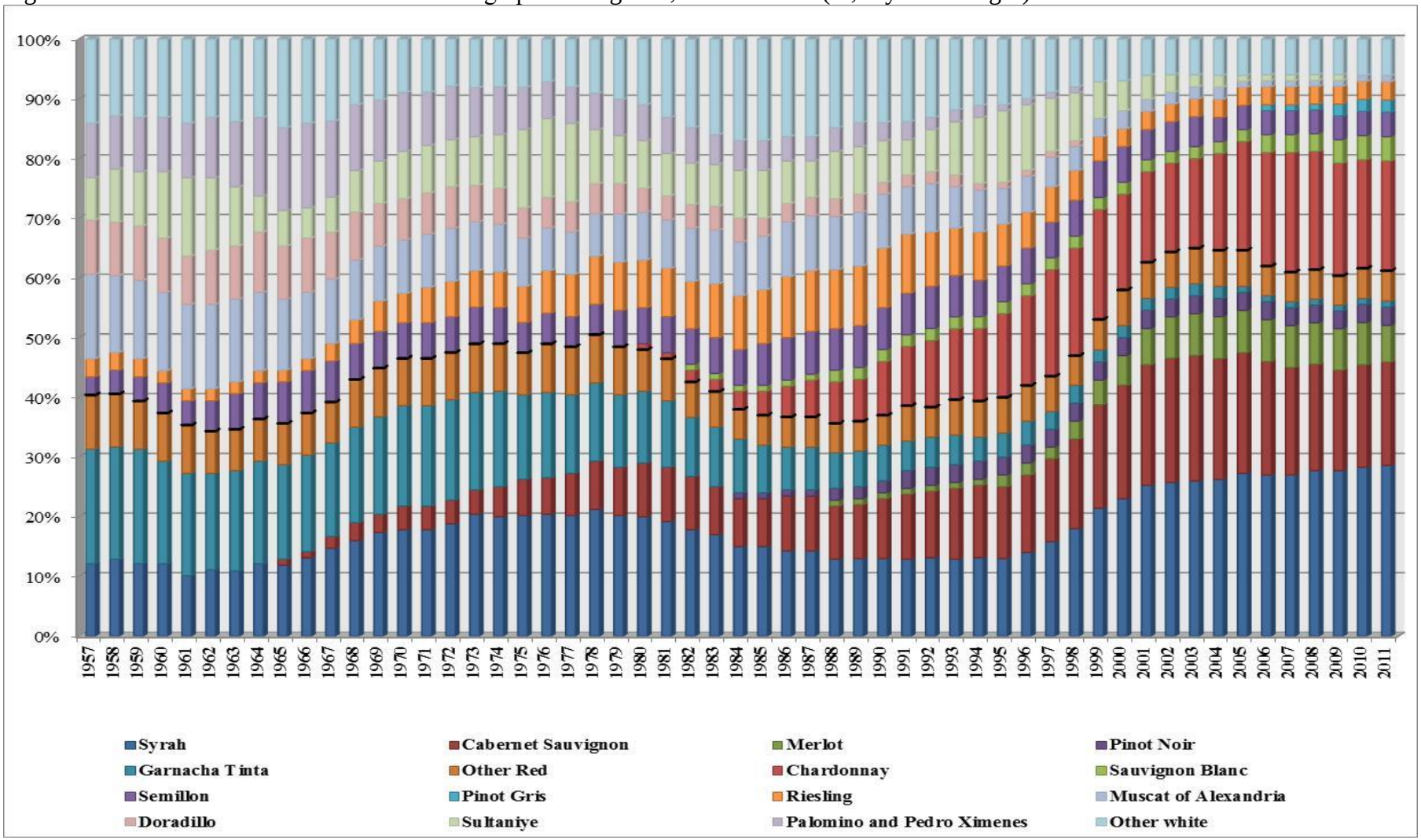
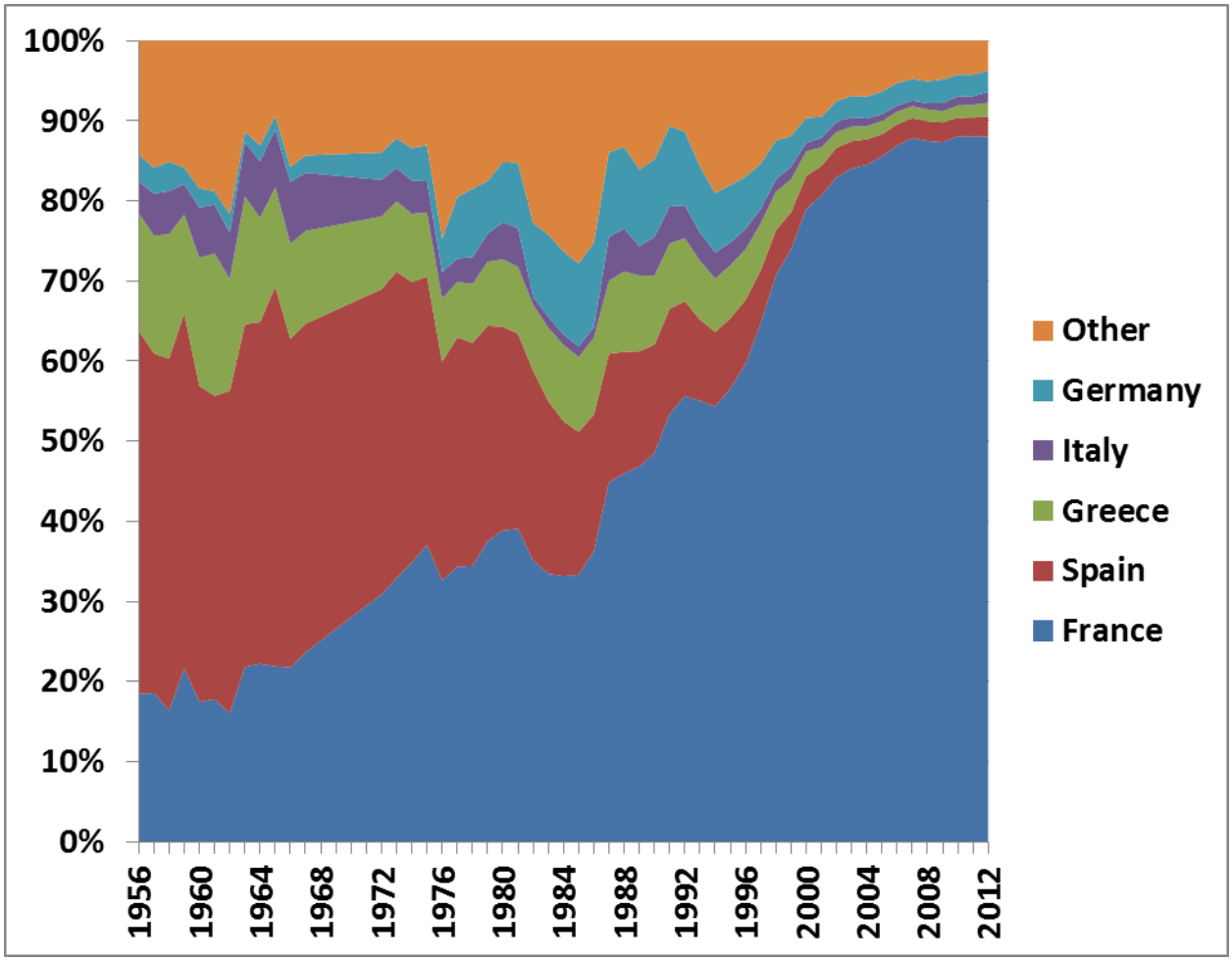
Figure 1: Shares of varieties in Australia's winegrape bearing area, 1956 to 2012 (%, 3-year averages)



Source: Anderson (2015).

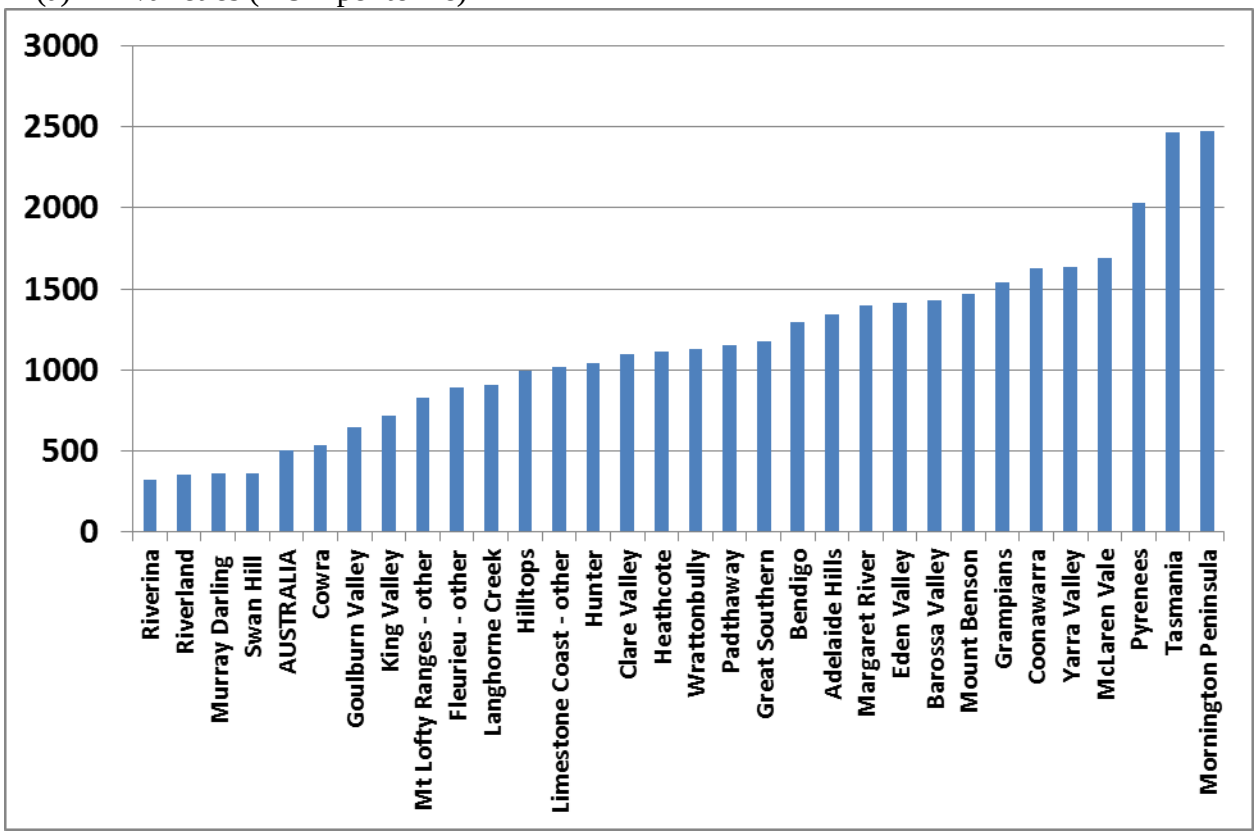
Figure 2: Shares of Australian winegrape area, by varietal country of origin, 1956 to 2012 (%)



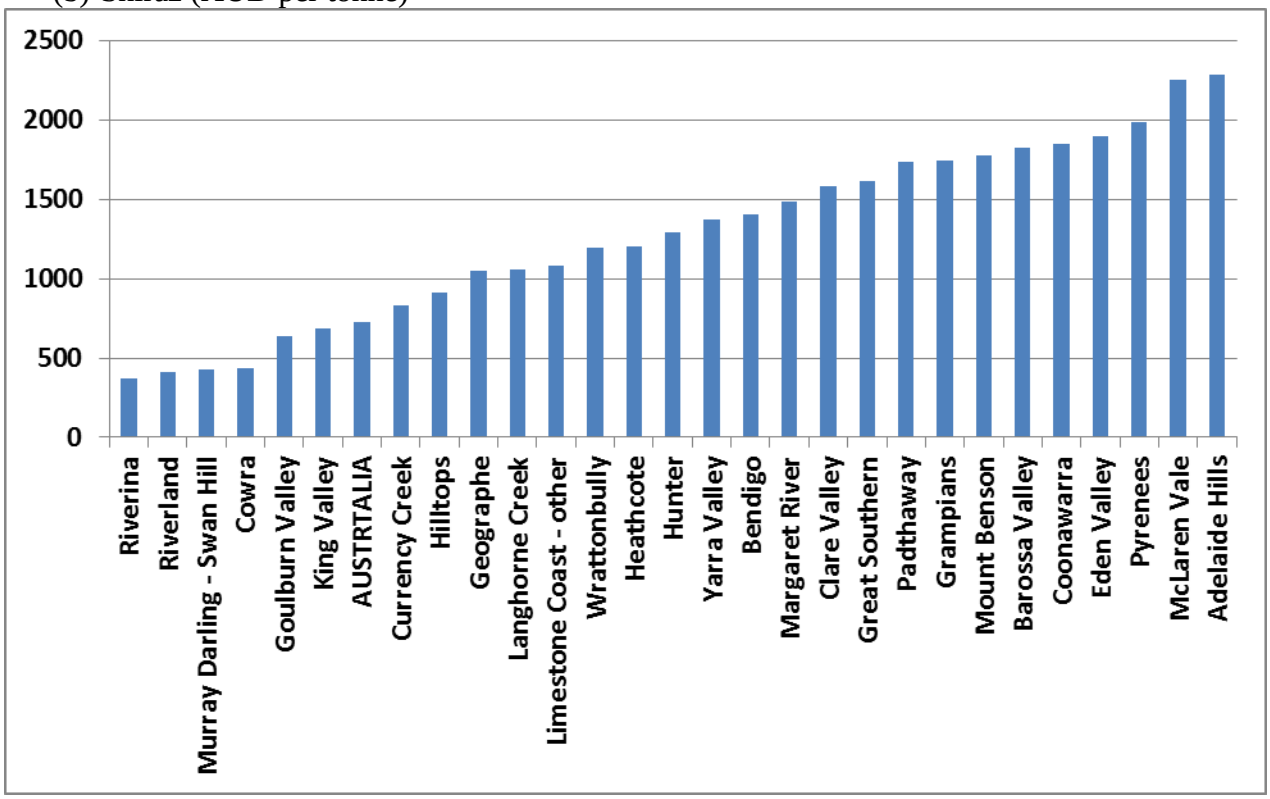
Source: Anderson (2015).

Figure 3: Average price of winegrapes, by region, Australia, 2013

(a) All varieties (AUD per tonne)

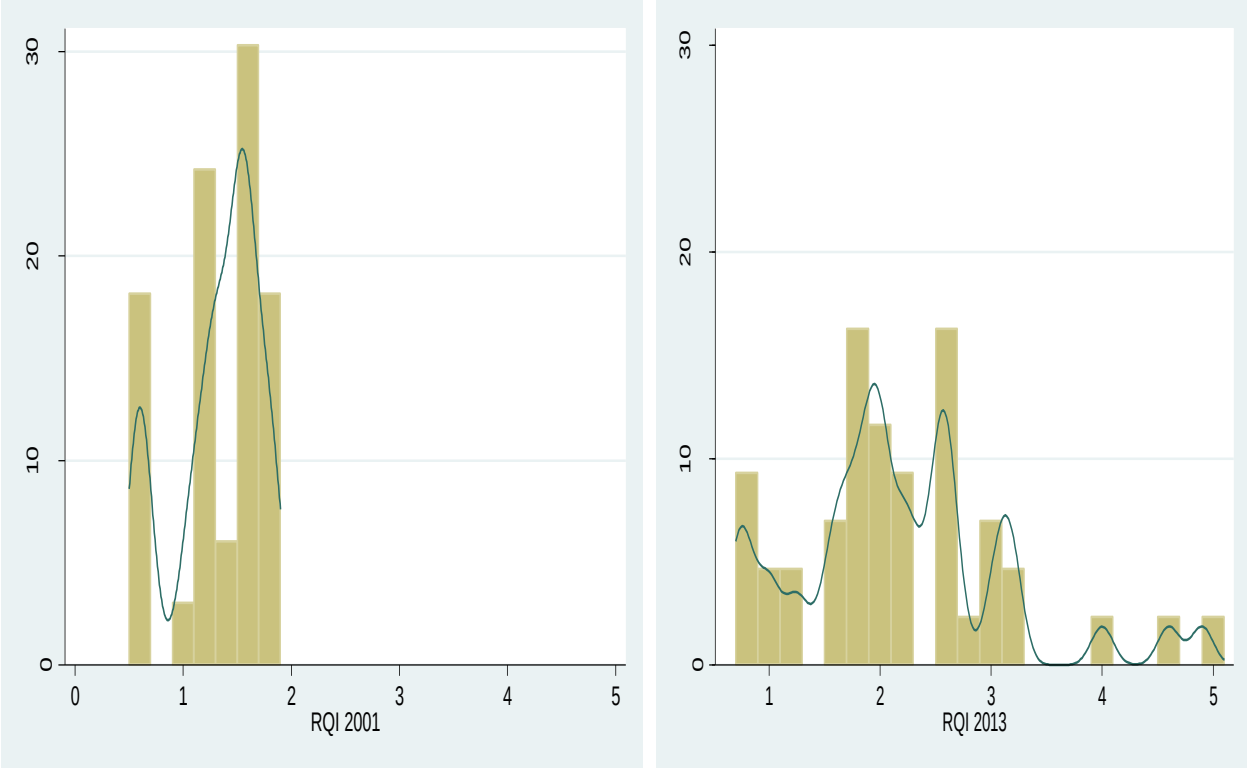


(b) Shiraz (AUD per tonne)



Source: Anderson (2015).

Figure 4: Regional Quality Index[a] dispersion, Australia, 2001 and 2013

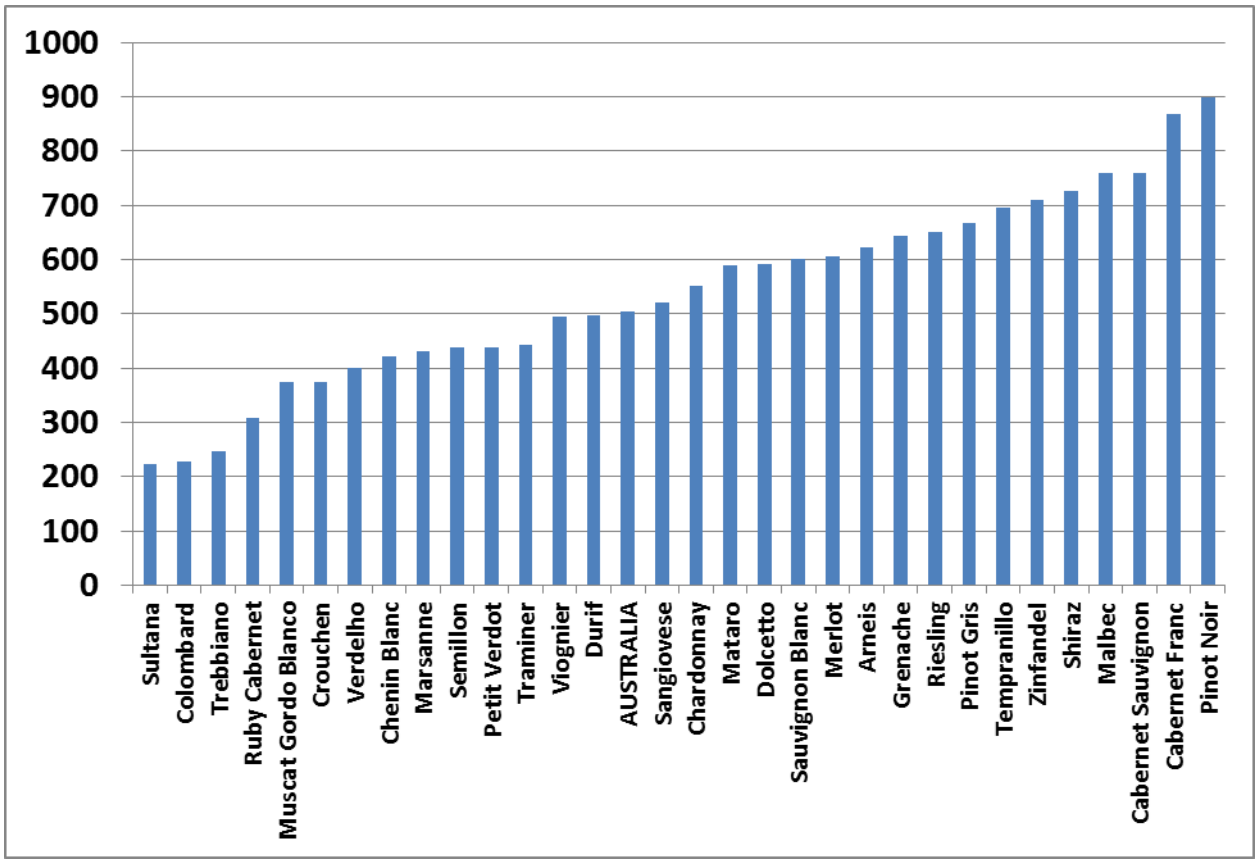


[a] The Regional Quality Index is the ratio of the regional to national average price for all varieties.

Source: Anderson (2015).

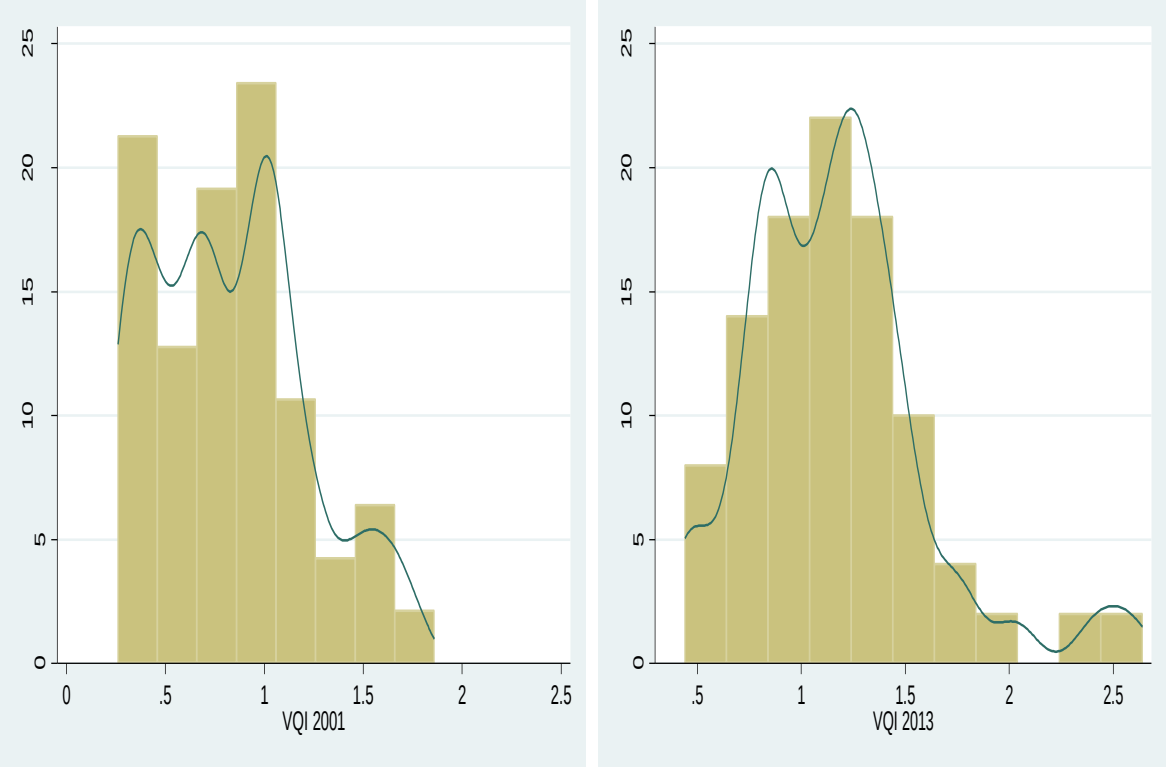
Figure 5: National average prices of main winegrape varieties,[a] Australia, 2013

(AUD per tonne)



Source: Anderson (2015).

Figure 6: Varietal Quality Index[a] dispersion, Australia, 2000, 2010 and 2013



Source: Anderson (2015).

Table 1: Varietal area shares and Varietal Intensity Index,[a] Australia, 2010

	Share of Australian area, %	Australia's share of global area, %	Varietal Intensity Index
Tarrango	0.0	100.0	30.3
Verdelho	1.0	76.6	23.2
Muscat a Petits Grains Rouge	0.2	37.5	2.0
Semillon	4.0	27.6	8.4
Syrah	28.1	23.0	7.0
Petit Verdot	0.8	17.0	5.1
Ruby Cabernet	0.6	16.8	5.1
Chardonnay	18.3	14.0	4.2
Marsanne	0.2	13.7	4.1
Arneis	0.1	13.6	4.1
Crouchen	0.1	13.1	4.0
Sultaniye	0.3	12.6	3.8
Viognier	0.9	12.3	3.7
Durif	0.3	11.7	3.6
Cabernet Sauvignon	17.1	9.0	2.7
Riesling	2.7	8.2	2.5
Muscat of Alexandria	1.3	7.8	2.4
Pinot Gris	2.2	7.6	2.3
Colombard	1.5	6.9	2.1
Sauvignon Blanc	4.3	5.9	1.8
Gewurztraminer	0.5	5.8	1.8
Pinot Noir	3.1	5.4	1.6
Savagnin Blanc	0.1	5.0	1.5
Roussanne	0.1	4.8	1.4
Muscadelle	0.0	4.1	1.2
Merlot	6.6	3.8	1.1
Other varieties	5.5	n.a.	n.a.
TOTAL	100.0	3.3	n.a.

[a] The share of a variety in the national vineyard divided by its share globally.

Source: Anderson (2013).

Table 2: Emerging winegrape varieties in Australia, 2001 to 2012[a]

	Bearing area (hectares)		**Total area** (including newly planted, hectares)
	2001	2010	2012
Arneis		153	81
Barbera	103	116	104
Dolcetto		154	124
Durif	181	417	500
Nebbiolo	50	98	122
Roussanne		83	
Savagnin Blanc		94	140
Tempranillo	41	476	712
Tribidag (Zinfandel)		149	104
Viognier	117	1402	1197
SUB-TOTAL	**492+**	**3142**	**3081+**
% of total	***0.4%***	***2.1%***	***2.1%***
TOTAL	**130,602**	**151,788**	**148,509**

[a] Blank spaces mean data are unavailable, rather than zero.

Source: Anderson (2015).